

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kreutz, et al.

Serial Number: Unknown

Appliance For Plucking Hairs out of Human Skin

Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

) Examiner: Dawson, G.
)
) Group Art Unit: 3731
)
) Filed: Herewith
)

FIRST PRELIMINARY AMENDMENT

Prior to examining this application kindly enter this preliminary amendment.

In the Abstract:

Amend the Abstract to read:

The invention is directed to an appliance for the epilation of the human skin, having a housing to accommodate a motor and a drive mechanism for driving at least one clamping device (43) by which the user's hairs can be extracted. Moreover, a stimulation mechanism is provided to reduce the sense of pain during epilation. This mechanism includes at least one element (55) that is movable toward and away from the skin when the appliance is placed in epilating position on the user's skin. According to certain embodiments of the present invention, the at least one element (55) has a free end (56) and is arranged adjacent to the side of the rotary clamping device (43). In consequence, the user perceives at least subjectively a reduced sense of pain during epilation. Still further, a method for epilation and a method for the use of the appliance of the present invention are described.

CERTIFICATE OF MAILING (37 CFR 1.8)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as Express Mail, being Express Mail No. EL157816575 US in an envelope addressed to the Box Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

September 18, 2001
Date

Carren L. Mundee
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In the Specification:

At page 1, after the title, add the following paragraph:

This application is a continuation of application U.S. Serial No. 09/470,311, filed on December 22, 1999, allowed, which is a continuation application of U.S. Serial No. 09/996,991, filed on December 12, 1997, now U.S. Pat. 6,083,233, which had been filed as a continuation of International Application PCT/EP96/02412, with an international filing date of June 4, 1996.

At page 1, after the title, insert the caption

Background of the Invention

At page 2, before line 5, insert the caption

Summary of the Invention

At page 2, replace paragraph beginning at line 11 with the following:

According to the present invention, this object is achieved in an epilation appliance and in a method wherein by reason of the fact that at least one element that is movable toward and away from the skin has one free end, a mechanical pulse can be generated to advantage, producing a stimulation on the skin which overshadows the actual pain during epilation. Furthermore, by arranging the at least one element, but in particular several elements, adjacent to the side of the rotary clamping device, the stimulation on the skin occurs advantageously before or during the epilating operation.

At page 11, before line 15, change "In the drawings," to the caption

Brief Description of the Figures

At page 12, before line 30, insert the caption

Detailed Description of Preferred Embodiments

At page 12, change the paragraph beginning at line 30 to:

The features described in the following with reference to FIGS. 1 to 14 are suitable for use with an epilating appliance as disclosed in European Offenlegungsschrift (Published Application)

No. 596 283 A1 and as it is herewith incorporated in the disclosure content of the present patent application by express reference.

At page 13, change the first sentence of the paragraph beginning at line 11 to read (the remainder of the paragraph remains as-filed):

FIG. 1 shows an epilation head 1 of an epilating appliance of the present invention.

In the Claims:

Please cancel the original claims 1-23, without prejudice, and kindly add the following claims, support for which is discussed in the "Remarks" section:

- 24. A depilation apparatus comprising
- a housing,
 - a depilation member for gripping hairs on human skin and pulling the hairs from the skin,
- and
- a vibration member for exerting mechanical vibration on the skin to thereby provide an anaesthetizing effect on the skin while the hairs are being pulled from the skin by the depilation member, both the depilation member and the vibration member provided in the housing,
- characterized in that
- the vibration member comprises flexible protrusions for contacting the skin which are disposed on a carrier, and
- means for vibrating the carrier to thereby vibrate the flexible protrusions and thereby exert mechanical vibrations on the skin where these vibrating flexible protrusions contact the skin.
25. A depilation apparatus as claimed in claim 24, characterized in that the protrusions are disposed in a uniform pattern.
26. A depilation apparatus as claimed in claim 25, wherein the protrusions have, adjacent a distal free end thereof, a conical shape.

27. A depilation apparatus as claimed in claim 25, wherein the protrusions each have a rounded end portion.

28. A depilation apparatus as claimed in claim 25, wherein the protrusions comprise a resilient plastics material.

29. A depilation apparatus as claimed in claim 24, characterized in that each of the protrusions has, adjacent a distal free end thereof, a conical shape.

30. A depilation apparatus as claimed in claim 29, wherein the protrusions each have a rounded end portion.

31. A depilation apparatus as claimed in claim 29, wherein the protrusions comprise a resilient plastics material.

32. A depilation apparatus as claimed in claim 24, characterized in that the protrusions each have a rounded end portion.

33. A depilation apparatus as claimed in claim 32, wherein the protrusions comprise a resilient plastics material.

34. A depilation apparatus as claimed in claim 24, characterized in that the protrusions comprise a resilient plastics material.

35. A depilation apparatus as claimed in claim 24, characterized in that the means for vibrating the carrier comprises a first member which is pivotable about a first axis, an eccentric member having a second axis extending substantially parallel to the first axis and which comprises a mounting member disposed eccentrically relative to the second axis, and a mechanical spring biasing the first member relative the mounting member.

36. A depilation apparatus as claimed in claim 25, characterized in that the mechanical spring is a helical spring extending substantially perpendicular to the first axis.--

REMARKS

This application originated in Germany, and this First Preliminary Amendment is believed to place the specification in a form that is more consistent with the practice in the U.S. Patent and Trademark Office, and to secure applicants' rights in their invention.

Claims 24-36 are presented, claims 1-23 having been canceled without prejudice. Claim 24 is independent. The present claims are supported by the embodiments and disclosure relating to Figs. 1-9.

The specification has been amended to refer to the present application as a continuation of application U.S. Serial No. 09/470,311, filed December 22, 1999, now allowed, which is a continuation application of U.S. Ser. No. 09/996,991, filed Dec. 12, 1997 (now issued U.S. Pat. 6,083,233) which had continued from International Patent Application PCT/EP96/02412, with an international filing date of June 4, 1996.

Applicants' claim to priority under 35 U.S.C. §119 of an application filed in Germany, serial no. 195 21 585.0, filed June 14, 1995, is supported by the certified copy of that German priority document on file in the grand-parent application, U.S. Ser. No. 08/996,991, receipt of which had already been acknowledged by Examiner therein.

Amendments to the Specification:

The specification is amended to improve readability, and these are the same amendments that were already entered by Examiner in the parent application.

Disclosure of Claims copied from an Issued U.S. Patent:

In accordance with the possible requirement in 37 C.F.R. §1.607(c) as understood by Applicants, it is noted that claims of the present application correspond to claims 1-20 of U.S. Patent 6,165,182 (Caric et al.), issued December 26, 2000, having a filing date of April 8, 1996, and are

thus presented within one year of the issue date of said patent. Applicants' priority filing date (June 14, 1995) is senior to both Caric et al.'s filing date (April 8, 1996) and his foreign priority date (Nov. 28, 1995), and thus would be entitled to senior party status were Examiner to initiate an Interference proceeding.

The invention of the present claims has as its purpose, as Caric et al. '182 (hereinafter "Caric") states at column 5, lines 16-30, that the painful stimulus of the hair tweezing is overcome or anaesthetized by overloading the nerve pathway by the additional imposed vibratory stimulus to massage the skin in a comfortable manner. The present application identically states that the overlaid pulse overshadows the actual epilating pain by saturating the nerve, see carryover text at page 2, lines 15 to page 3, line 8.

Caric gives a special, broad definition to the claim term "flexible protrusion." Specifically, according to the Caric disclosure, the protrusions themselves do not have to be made of a resilient material (see column 10, lines 34-53). Rather, the claim term "flexible protrusions" is stated to equally embrace rigid protrusions mounted to the carrier by an elastically deformable element, or even that a part of the moving linkage supporting the rigid protrusions is either itself elastically deformable or that a linkage member is mounted on an elastically deformable element. To quote from that passage:

"In accordance with the invention, the protrusions 23 may alternatively be made from a relatively rigid material. In such an embodiment, e.g., the protrusions 23 are each disposed on the carrier 19 via an elastically deformable reduced portions of the protrusions 23."

Further, the Caric patent also gives as an example with respect to Figure 4 that the protrusions 23 be rigid, while the connecting rod 81 of the means 61 for vibrating the carrier 19 is provided with an elastically deformable element.

It is noted that the element "vibration member" is given the reference numeral 17 throughout the Caric patent (e.g., Fig. 1). In each of the four disclosed embodiments, the "means for vibrating the carrier" (e.g. Fig. 4, 93) is what makes the vibration member 17 have any motion at all. For example, in the fourth embodiment of Figure 6, the yoke or lever 95 surrounding the mouth containing the depilation discs is caused by its cam follower 105, driven by rotating cam 99, to swing relative to the housing back and forth between lateral stop surfaces 115, 117 over an arc of

travel centered on pivot axis 97. Furthermore, the "carrier" is simply the part at the distal end of the assemblage near the skin surface connecting the protrusions to the vibrating means.

Information Disclosure Statement

The accompanying I.D.S. makes of record the prior art of record on the title page of the Caric patent, those being understood to be the references deemed by the Patent Office and deemed by Caric et al.'s legal representative(s) as relevant to finding the claims to be patentable.

Prosecution History of the Caric patent:

An inspection of the public file reveals that during prosecution of Caric, the claims were appealed from a final §103 rejection based, and that the rejection was reversed by the Board. As discussed in that file in the Decision on Appeal dated June 13, 2000, the Board reversed a rejection, wherein the Examiner had alleged it would have been obvious to modify Garenfeld with a plurality of flexible protrusions, since there was no motivation for any such modification in the prior art and, even if so modified, it would have caused the Garenfeld screen plate to be even further spaced from the skin and unsuitable for its intended purpose (See Decision at pages 5-6).

Correspondence of pending claims to Caric '182 claims:

Claim 24 corresponds identically to Caric claim 1. Support for claim 24 is seen at the following:

The depilation member 1 is defined by the plurality of clamping plates 4 (Fig. 1). The vibration member has impulse elements 16 mounted within hair feeding guides 6 that oscillate during operation of the depilation member and exert mechanical pulses on the skin. These localized impulses mask the perceived discomfort of epilation, see page 3-4, carryover paragraph. The depilation member and the vibrating elements are provided in the housing 2.

The vibration member is disclosed as being made of resilient plastic material, as in the embodiment of Figure 8, specification at page 18, lines 1-4, or, alternatively (and equally supporting the claim feature), the vibration member is rigid and flexibly mounted on springs, as in the embodiment of Figure 5, which can be used with various embodiments shown in Figs. 1-2, or Figure 6, or Figure 7. In the Fig. 5 embodiment, the protrusions 16 are carried on hubs which are interconnected by shaft 31 (a "carrier") which is flexibly carried on part of rotary cylinder 10 by

springs 32, see column 7, lines 37. In an alternative embodiment, individual protrusions, such as shown in Fig. 3 as wheels 28 disposed on a hub or carrier axle (unnumbered) are flexibly supported by springs 33 and carried as shown in Fig. 6 within slotted arms (unnumbered) for generally linear motion.

It is pointed out again that, according to the definition given the claim term "flexible protrusions" by the Caric patent discussed above, the protrusions themselves do not have to be made of a resilient material; rather, the term "flexible protrusions" in the claim is defined to include such explicit examples given in the Caric disclosure as rigid protrusions mounted to the carrier by an elastic element, and rigid protrusions and carrier mounted to the vibrating means by an elastic element, e.g., a spring (see Caric at column 10, lines 44-49).

Various embodiments generating the reciprocating movements of elements 16 are shown in Figs. 5, 6 and 7. The skin impacting elements 16 and their carrier are vibrated as shown by two-headed arrow 20 (Fig. 6) by the rotation of that portion of the cylinder 10, in response to the centrifugal force, or a spring force, or any combination of those, see specification at page 6, lines 1-3 or carryover paragraph at page 16, line 24 to page 17, line 3. In other embodiments, such as Fig. 7, the protrusions are guided and vibrated by motion relative the eccentric cam surface 34.

Claim 25 corresponds to Caric claim 2. The protrusions are disposed in a regular pattern, e.g. rows, see e.g. Figs. 1 or 8b. Caric also gives a single row as an example of a "pattern", see col. 11, lines 6-8.

Claims 26 and 29 correspond to Caric claims 3 and 6, respectively (each of these dependent claims adds the same feature, but merely relates back to different claims). Support is seen at e.g. Figs. 3a/b, 7 or 8, that near their free ends the vibrating elements are formed with a tapered conical shape. Such language was allowed in claims in the grandparent case, see e.g. issued claim 11 in U.S. Pat. 6,083,233. When the overall portion near the free end is considered, Fig. 3a/b discloses first and second truncated right-circular cone shapes that are placed back-to-back, each conical portion resembling a dish or saucer. The distal free end refers to the shape that is presented for contact with the skin, which is the relevant portion that stimulates the skin, and as such physically has some extent along the protrusion. The protrusions are also in a regular pattern (e.g. rows) as

discussed above. Thus, claim 26 and Caric claim 3, and claim 29 and Caric claim 6, are not patentably distinct.

Claims 27, 30 and 32 correspond to Caric claims 4, 7 and 9, respectively (each of these dependent claims adds the same feature, but merely relates back to different claims). Support is seen at e.g. Figs. 3a or Fig. 7. As Examiner had pointed out in an Office Action during prosecution of the grandparent application (now U.S. Pat. 6,083,233, see Office Action of July 14, 1999 at page 3), some of the protrusions have ultimate free ends which are circular, i.e., they are rounded, since they present a circular rim.

The protrusions are also in a regular pattern (e.g. rows) as discussed above (claim 27).

As shown in either of Figs. 3, 4, 5 or 8, the protrusions have a smoothly truncated conical (back-to-back saucer) shape that terminates in a rounded portion (claim 30).

Thus, claim 27 and Caric claim 4, claim 30 and Caric claim 7, and claim 32 and Caric claim 9, are not patentably distinct.

Claims 28, 31, 33 and 34 correspond to Caric claims 5, 8, 10 and 11, respectively (each of these dependent claims adds the same feature, but merely relates back to different claims). These present claims describe that the protrusions comprise a resilient plastics material, which describes the same invention as even broader than, and reads upon, Caric's "elastomeric material". Support is in the specification at page 18, lines 1-4 (see e.g. the row of protrusions in Figure 8), and also as discussed above with the preceding claims. Thus claims 28, 31, 33 and 34 are not patentably distinct from each of claims 5, 8, 10 and 11, respectively.

Caric Dependent claims 12-20:

The remaining Caric claims 12-20, all dependent claims, are believed to be not patentably distinct from the present claim 24. Furthermore, if Examiner indicated that an Interference proceeding were appropriate, it is noted that Applicants' more senior application would be treated as prior art against Caric, and also fully combinable with other teachings in the field, to show that the Caric dependent claims are not nonobvious thereover and thus not patentable to Caric.

Caric claims 12 and 18 each describes that the vibration member uses a pivotal lever which is moved by either an eccentric element, which in claim 18 is said to be a cam, moving about an

axis parallel to the pivotal lever's axis, and that a spring is prestressed against the lever. These are shown respectively in Caric Figure 4 and Figure 6. The prestressed spring (59), said to be a helical spring in claim 13, is merely stated to have the function that contact between the protrusions and the skin "is maintained even when the position of the depilation apparatus relative to the skin is changed", column 8, lines 63 to 67 (referring to Fig. 4).

This is not patentably distinct from the disclosure of Applicants' more senior application (which would, as noted, in an Interference be treated as prior art against Caric) in combination with the knowledge that one of ordinary skill in the art has from EP 493 849 (Garenfeld) to provide a vibration member having a lever (15) pivoting about an axis (18) driven by an eccentric element (24) which is moving about the motor's axis 13, and axis 13 lies in a plane parallel to axis 18, and obvious for a spring to provide a return bias.

Caric claims 14 and 15 each recites an adjustment member, shown in Figure 4 of the Caric patent with reference numeral 65, which attenuates the vibration member. Its operation and purpose is described at column 9, lines 1 to 25 and Fig. 5c, to retract or attenuate the vibration member's action on the skin. Adjustment switches to adjust the pulsing are known from German patent application DE 44 08 809, e.g. at column 4, lines 53-60 (translation included, and corresponding U.S. Pat. 5,704,935). Claim 16 limits the vibration member's motion with a mechanical stop, which is per se known.

Claim 17 states, in so many words, that the protrusions and carrier are connected to a parallelogram linkage so as to effect a linear motion of the vibration member and protrusions. Such translational motion of the vibration member is known from EP 493 849 (Garenfeld), see col. 2, line 39 ("a translation relative to the housing is possible"). In substance, the claim recites that the lever and carrier set forth in Caric claim 12 are restrained by a second pivotal yoke in parallel arrangement to the lever, as shown in Figure 4 and explained in the Caric patent at column 3, lines 57 to 64.

Claim 19 is similar to claim 17 and converts rotary motion to linear motion by the well-known crankshaft-piston slider arrangement as shown in Figure 3 and at column 7, lines 18 to 26. Here the carrier 19 is analogous to the piston, guide 47 to the cylinder, and the eccentric mounting and coupling members to the crankshaft.

Not only are parallelogram linkages and rotary-slider arrangements known per se to convert pivotal motion to translational motion of an output end, but this is simply a way of

effecting with a greater number of parts what a secondary reference such as EP 493 849 (Garenfeld) already teaches, that "the screen plate, however, may also be fastened to the housing in such a way that a translation relative to the housing is possible" (Garenfeld at col. 2, lines 37-39).

The feature of claim 20 adds a mechanical spring to claim 19 merely for the same purpose as described above in claim 13, see Caric column 7, lines 42 to 50, and is likewise known.

Furthermore, in particular present claim 35 corresponds to each of Caric claims 12 and 18, and claim 36 to Caric claim 13. Support is seen in embodiments employing the additional aspects of Figures 5 and 7. The protrusions and their carrier hubs are linked by an axle 31 at whose ends helical springs 32 support it relative to the first member 10 (drum or cylinder on which it mounts). Those assemblages of protrusions, together with member 10, pivots about an axle 11 indicated by rotational arrow 14 (see Fig. 2). As explained at page 17, second paragraph, eccentric member or disc 34 (the solid line disk) has a central axis (indicated at the dotted line cross-hairs) parallel to, and identical with, axle 11 and has a cam track portion 34 (mounting member) which is eccentric to the axis, so as to control radial displacement of the vibrating protrusions, and the spring 32 biases the ends of member 31 relative to the cam track portion 34.

Caric claims 12 and 18 are described in Caric as his "third" and "fourth" embodiments, see Fig. 4 and Figs. 6-7 therein, whose advantages are described at col. 2, lines 11-37 and col. 3, lines 14-40, as being flexible couplings so that position of the vibration members relative to the housing is kinematically indefinite (not a fixed location), in order that contact between the vibration member and the skin will be maintained even if the position of the depilation apparatus relative to the skin changes, i.e., it yields (see sol. 2, lines 32-37, col. 3, lines 33-40). This is similarly provided by Applicants' embodiments at Figure 5 and 7.

Thus, claim 35 is not patentably distinct from Caric claims 12 and 18, and claim 36 is not patentably distinct from Caric claim 13. The remaining claims 14-20 reflect mere construction

details that are not patentably distinct from each of present claims 35 or 36.

If a telephone conference would helpfully advance prosecution, the Examiner is invited to telephone the undersigned at 617-421-7939. Please apply any charges or credits to Deposit Account No. 07-1350.

Respectfully submitted,



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27199

PATENT TRADEMARK OFFICE

APPENDIX

Marked-Up Version showing additions and deletions

In the Specification:

Additions are indicated by underlining, deletions by [bracketing]:

At page 1, after the title, add the following paragraph:

-- This application is a continuation of application U.S. Serial No. 09/470,311, filed on December 22, 1999, allowed, which is a continuation application of U.S. Serial No. 09/996,991, filed on December 12, 1997, now U.S. Pat. 6,083,233, which had been filed as a continuation of International Application PCT/EP96/02412, with an international filing date of June 4, 1996. -- .

At page 1, after the title, insert the caption --Background of the Invention--;

at page 2, before line 5, insert the caption --Summary of the Invention--;

At page 2, replace paragraph beginning at line 11 with the following:

-- According to the present invention, this object is achieved in an epilation appliance [of the type initially referred to by the characterizing features of claim 1,] and in a method wherein by [the features of claims 20 and 23. By] reason of the fact that [the] at least one element that is movable toward and away from the skin has one free end, a mechanical pulse can be generated to advantage, producing a stimulation on the skin which overshadows the actual pain during epilation. Furthermore, by arranging the at least one element, but in particular several elements, adjacent to the side of the rotary clamping device, the stimulation on the skin occurs advantageously before or during the epilating operation. --

At page 11, before line 15, change "In the drawings," to the caption

Brief Description of the Figures

At page 12, before line 30, insert the caption

Detailed Description of Preferred Embodiments

At page 12, change the paragraph beginning at line 30 to:

-- The features described in the following with reference to FIGS. 1 to 14 are suitable for use with an epilating appliance as disclosed in European Offenlegungsschrift (Published Application) No. 596 283 A1 and as it is herewith incorporated in the disclosure content of the present patent application by express reference. --

At page 13, change the first sentence of the paragraph beginning at line 11 to read (the remainder of the paragraph remains as-filed): --FIG. 1 shows an epilation head 1 of [such] an epilating appliance of the present invention. --

In the Abstract:

--The invention is directed to an appliance for the epilation of the human skin, having a housing to accommodate a motor and a drive mechanism for driving at least one clamping device (43) by [means of] which the user's hairs can be extracted. Moreover, [means are] a stimulation mechanism is provided to reduce the sense of pain during epilation. [These means] This mechanism includes at least one element (55) that is movable toward and away from the skin when the appliance is placed in epilating position on the user's skin. According to certain embodiments of the present invention, the at least one element (55) has a free end (56) and is arranged adjacent to the side of the rotary clamping device (43). In consequence, the user perceives at least subjectively a reduced sense of pain during epilation. Still further, a method for epilation and a method for the use of the appliance of the present invention are described.

[(FIG. 10)

11 Dec. 97/BH.] --